Mathematical Modelling of Curved Data

Linear Graph

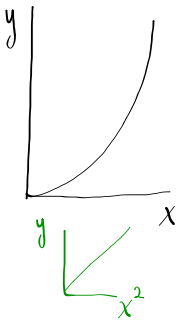
$y \propto x$

$y = kx$

$(y = mx + b)$

A graph of y vs x will be linear with a slope k and a y-intercept of zero.

Power Curve



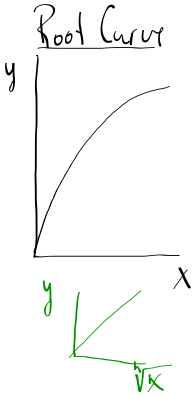
$y \propto x^n$

$y = kx^n$

$(y = mx + b)$

A graph of y vs x^n will be linear with a slope of k and a y-intercept of zero.

Root Curve



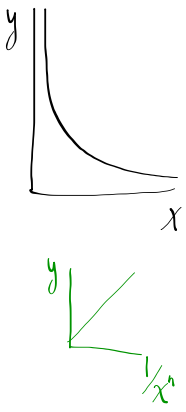
$y \propto \sqrt[n]{x}$

$y = k\sqrt[n]{x}$

$(y = mx + b)$

A graph of y vs $\sqrt[n]{x}$ will be linear with a slope of k and a y-intercept of zero.

Inverse Curve



$y \propto \frac{1}{x^n}$

$y = k\left(\frac{1}{x^n}\right)$

$(y = mx + b)$

A graph of y vs $\frac{1}{x^n}$ will be linear with a slope of k and a y-intercept of zero.